

Application No. 09/737,965

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-2. (Canceled).

3. (Previously Presented) An apparatus according to claim 10, further comprising an image analyzer for analyzing the captured images for selection of a segment of the captured image for the compositor.

4. (Previously Presented) An apparatus according to claim 3, wherein the image analyzer comprises a registration detector for identifying the registration of one image with respect to another.

5. (Original) An apparatus according to claim 3, wherein the image analyzer is operative to analyze the quality of at least a region of a captured image, for selection of a segment therefrom for the compositor according to the image quality of the segment.

6. (Original) An apparatus according to claim 5, wherein the quality is determined by the sharpness of the image.

7. (Previously Presented) An apparatus according to claim 5, wherein the quality is determined by the resolution of the image.

Claims 8-9. (Canceled).

10. (Currently Amended) An apparatus for capturing an image, comprising:
an image capture device for capturing plural image segments of an object scene at different focus distances and zoom settings; the image capture device having: a variable focus mechanism for varying the focus distance for the image

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capture device, a variable zoom mechanism for varying the zoom setting for the image capture device, and a controller operative to control the variable focus mechanism and the variable zoom mechanism to vary the focus setting and the zoom setting in combination;

a perspective correction device for determining at least one geometric transform to correct [[said]] the plural image segments for perspective distortion; and

an image compositor for compositing a perspective corrected image of said object scene from the plural image segments with varied focus and magnification to which said at least one geometric transform has been applied;

wherein the image capture device is positioned at an oblique angle to the object scene when capturing the plural image segments; and

wherein the image capture device compensates for the perspective distortion by increasing, at a level that varies depending on the oblique angle to the object scene, the zoom setting as the focus distance is increased.

11. (Previously Presented) An apparatus according to claim 10, wherein the apparatus is implemented in a camera.

Claims 12-15. (Canceled).

16. (Currently Amended) A method of generating a digital image of an object, the method comprising:

capturing plural [[images]] image segments of an object scene at different focus distances and zoom settings while controlling in combination the focus distance and the zoom setting [[settings]];

determining at least one geometric transform for correcting the plural image segments for perspective distortion; and

compositing a perspective corrected image from the plural image segments with varied focus and magnification to which the at least one geometric transform has been applied;

wherein said capturing further comprises:

capturing the plural image segments of the object scene at an oblique angle to the object scene;

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compensating for the perspective distortion by increasing, at a level that varies depending on the oblique angle to the object scene, the zoom setting as the focus distance is increased.

17. (Previously Presented) A method according to claim 16, further comprising analyzing at least one region of each captured image or image segment to identify the quality of said region in that captured image; and

wherein the step of compositing comprises compositing the image of the object from image segments extracted from the plural captured images according to the result of the quality analysis.

18. (Original) A method according to claim 17, wherein the step of analyzing comprises determining the relative qualities of a region of an image in the plural captured images, and identifying which captured image provides said region with the best quality.

19. (Original) A method according to claim 17, wherein the quality analysis comprises analyzing at least one characteristic selected from the characteristics of: image sharpness; and image resolution.

20. (Original) A method according to claim 16, wherein the method is implemented in a camera.

21. (Previously Presented) A method according to claim 20, further comprising automatically inferring the zoom settings with a sensor of the camera.

22. (Previously Presented) A method according to claim 21, wherein said inferring infers the zoom settings with an accelerometer.

23. (Previously Presented) An apparatus according to claim 10, wherein the variable zoom mechanism further comprises a sensor for automatically inferring the zoom settings.

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24. (Previously Presented) An apparatus according to claim 23, wherein the sensor is an accelerometer.

25. (Currently Amended) An apparatus for capturing a document image, comprising:

an image capture device for capturing plural image segments of a document scene at different focus distances and zoom settings; the image capture device having:

a relative angle with the document scene,

a variable focus mechanism for varying the focus distance for the image capture device,

a variable zoom mechanism for varying the zoom setting for the image capture device depending on the relative angle between the image capture device and the document scene, and

a controller operative to control the variable focus mechanism and the variable zoom mechanism to vary the focus setting and the zoom setting in combination;

a perspective correction device for determining at least one geometric transform to correct [[said]] the plural image segments of the document scene for perspective distortion; and

an image compositor for compositing a perspective corrected image of [[said]] the document scene from the plural image segments with varied focus and magnification to which said at least one geometric transform has been applied;

wherein the relative angle between the image capture device and the document scene is an oblique angle;

wherein the image capture device compensates for the perspective distortion by increasing, at a level that varies depending on the oblique angle to the document scene, the zoom setting as the focus distance is increased.

26. (Previously Presented) An apparatus according to claim 25, further comprising a sensor for inferring the relative angle between the image capture device and the document scene.

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27. (Previously Presented) An apparatus according to claim 26, wherein the sensor is an accelerometer.

28. (Previously Presented) An apparatus according to claim 26, further comprising an image analyzer for analyzing the plural image segments for selection of a segment of the document scene for the compositor according to the image quality of the segment.